Paper No. 21

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte GENE L. DUKE

_____

Appeal No. 95-0678
Application 07/938,960[1]

_____

ON BRIEF

_____

Before KIMLIN, PAK and OWENS, *Administrative Patent Judges.*

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 1-20, which are all of the claims in the application. Claims 1 and 10 are illustrative and read as follows:

1. A *coated gin-run* fuzzy cottonseed, said coating comprises

[1] Application for patent filed September 1, 1992.

a) a guar product,

b) which after drying makes the coated seed flowable.

10. A method of coating *gin-run* fuzzy cottonseed comprising the steps of:

a) wetting seed, thereafter

b) applying an excess of powdered coating material to the wetted seed, said coating material comprising a water-soluble material.

THE REFERENCES

Hinkes	3,911,183	Oct. 7, 1975
Redenbaugh	4,779,376	Oct. 25, 1988

THE REJECTIONS

Claims 1-9 stand rejected under 35 U.S.C. § 101 on the ground that the claimed invention is directed toward non-statutory subject matter. Claims 1-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hinkes taken with Redenbaugh.

OPINION

We have carefully considered all of the arguments advanced by appellant and the examiner and agree with appellant that the rejection of claims 1-9 under 35 U.S.C. § 101 and the rejection of claims 10-20 under 35 U.S.C. § 103 are not well founded.

Accordingly, these rejections will be reversed. However, we agree with the examiner that the invention recited in appellant's claims 1-9 would have been obvious to one of ordinary skill in the art at the time of appellant's invention over the applied references. The rejection of claims 1-9 under 35 U.S.C. § 103 therefore will be affirmed.

Appellant's claimed invention, as it is most broadly recited, is 1) a gin-run fuzzy cottonseed coated with a guar product such that the coating, after drying, makes the coated seed flowable, and 2) a method for coating gin-run fuzzy cottonseed by wetting the cottonseed and then applying thereto an excess of a powdered coating material which includes a water-soluble material.

Rejection Under 35 U.S.C. § 101

The examiner argues that in claims 1-9, "[t]he mere presence of a coating does not confer a unique property to the seed itself which would distinguish the seed from a naturally occurring seed" (answer, page 3). In the examiner's view (answer, page 6):

> . . . the facts of the instant application mirror those of *American Fruit Growers v. Brogdex*, 8 USPQ 131 (U.S. 1931) which holds that the presence of a coating on an orange does not confer a unique property to an

> orange which would distinguish the orange from one that is naturally occurring. In addition, *Ex parte Grayson*, 51 USPQ 413 holds that a thing occurring in nature, which is substantially unaltered, i.e. a headless and deveined shrimp, is not a "manufacture." See MPEP 706.03(b). In both instances the physical alteration of a naturally occurring product was not deemed to distinguish that product from the naturally occurring article, even if the physical alteration provided some benefit.

The examiner's argument is not well taken because of the differences in the facts of the present case and those of the cases relied upon by the examiner. The Supreme Court's reasoning in *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11-12, 8 USPQ 131, 133 (1931) is:

> Addition of borax to the rind of natural fruit does not produce from the raw material an article for use which possesses a new or distinctive form, quality, or property. The added substance only protects the natural article against deterioration by inhibiting development of extraneous spores upon the rind. There is no change in the name, appearance, or general character of the fruit.

In contrast, appellant's coating on the cottonseed causes the cottonseed to have a different property. Before coating, the lint on the cottonseed prevents the cottonseed from flowing like materials such as beans, corn and grain (specification, page 2,

lines 13-15 and page 3, lines 15-16). After coating, the lint is adhered close to the seed coat and the cottonseed is flowable (specification, page 6, lines 15-20).

In *Ex parte Grayson*, 51 USPQ 413, 414 (Bd. App. 1941), a beheaded, deveined shrimp was held to be a product of nature because "the part he is claiming is still in its natural state which has been changed in no manner." In the present case, in contrast, the cottonseed is not in its natural state, but has a different property due to the coating as discussed above.

The facts of the present case are more like those of *Ex parte Mowry*, 110 USPQ 389, 390 (Bd. App. 1955) and *Ex parte Shepherd*, 185 USPQ 480, 483 (Bd. App. 1974).

In *Mowry*, the claimed article was a soil coated with a film of a specified water-soluble polymer. The Board stated (*Mowry* 110 USPQ at 390):

> The claims are easily distinguished from the American Fruit Growers, Inc. v. Brogdex Co. case in that here the polymer is adsorbed by electrolytic phenomena on the soil particles and the individual soil particles are chemically bound to form an erosion resistant but water pervious layer on the surface of the soil. Such soil is quite distinct from untreated soil.

In *Shepherd*, the claimed article was soil having applied thereto a polymer gel which contained a fumigant. The Board's reasoning for holding that this article is patentable subject matter is (*Shepherd* 185 USPQ at 483):

> . . . the claims specifically call for "soil having applied thereto" a fumigant. The claims, therefore, clearly cover a *combination* of soil and fumigant. The fact that the claims can be read to permit the presence of only an "infinitesimal" amount of fumigant does not alter the fact the claims are directed to a combination.

We believe, essentially for the reasons set forth in *Ex parte Mowry, supra*, that the claimed combination may reasonably be considered statutory subject matter within the meaning of 35 U.S.C. § 101. Soil which is treated with appellant's fumigant has been transformed from soil and is a new and different article.

In our view, appellant's coating, by adhering the lint close to the seed coat and rendering the cottonseed flowable, transforms the cottonseed into an article which has a property which is not possessed by cottonseed in its naturally-occurring state. Thus, in line with the reasoning in *Mowry* and *Shepherd*, we consider appellant's coated cottonseed to be a "manufacture"

within the meaning of 35 U.S.C. § 101. Accordingly, the rejection of claims 1-9 under 35 U.S.C. § 101 is reversed.

Rejection Under 35 U.S.C. § 103

Hinkes discloses a seed coated with a polymeric, pesticide-containing coating so that there is slow release of the pesticide (col. 1, lines 35-42). Hinkes teaches (col. 1, lines 50-58) that

> . . . where the seed surface is covered with linters or short fibers, e.g., cotton seed, which alter the surface area of the polymeric-pesticide film, pretreatment is recommended. It was found that the surface of cotton seed, even after flame delinting, was covered with short fibers. Thus, the surface of linter covered seed is desirably first precoated with a natural or synthetic substance which will cover the fibers and adhere the fibers to each other as well as to the seed.

Hinkes teaches that the weight of the pretreatment coating is about 0.5 to 5 wt% of the coated seed (col. 3, lines 17-19), and that the pretreatment coating material preferably is water soluble and can be, among others, vegetable gums (col. 3, lines 23 and 30-33). The pretreatment coating is applied wet and then is dried (col. 3, lines 24-26).

Hinkes does not disclose guar gum as the vegetable gum. To remedy this deficiency, the examiner relies upon Redenbaugh.

This reference discloses seeds coated with adjuvant-containing gels (col. 3, lines 29-35). One of the disclosed gel materials is guar gum (col. 4, lines 66-67).

Appellant argues that Hinkes coats flame delinted cottonseed and therefore is not concerned with making fuzzy cottonseed flowable (brief, page 11). We are not persuaded by this argument because Hinkes broadly teaches that applying the pretreatment coating is preferred "where the seed surface is covered with linters or short fibers, e.g., cotton seed" (col. 1, lines 50-52). Thus, the cottonseed used by Hinkes does not appear to be limited to that which has been flame delinted. Furthermore, Hinkes teaches that the cottonseed, even after flame delinting, is covered with short fibers (col. 1, lines 53-55). Such partially delinted cottonseed falls within the scope of "fuzzy cottonseed" as that term is used by appellant (specification, page 11). Since Hinkes' precoating covers the fibers on the seeds (col. 1, lines 55-58), it appears to make the seeds flowable.

Appellant argues that there is no teaching to combine Hinkes and Redenbaugh (brief, page 18). This argument is not convincing because in view of the teaching by Hinkes that vegetable gums can

be used in the pretreatment coating (col. 3, lines 27-33), it would have been *prima facie* obvious to one of ordinary skill in the art to use any vegetable gum known in the art to be suitable for use in coating seeds, such as guar gum as taught by Redenbaugh (col. 4, lines 66-67).

Appellant further argues that Redenbaugh lists guar gum along with about 60 other coatings and that *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994), is authority for the proposition that selecting one out of a multitude of disclosed materials would not have been obvious to one of ordinary skill in the art (brief, page 3).

In *Baird*, the Knapp reference disclosed a genus encompassing what the court estimated to be more than 100 million diphenols. *Id.* Bisphenol A as recited in Baird's claim was encompassed by the genus but was not specifically disclosed in that reference. *Id.* The court stated that "[w]hile the Knapp formula unquestionably encompasses bisphenol A when specific variables are chosen, there is nothing in the disclosure of Knapp suggesting that one should select such variables. Indeed, Knapp appears to teach away from the selection of bisphenol A by focusing on more complex diphenols . . . ." *Id.*

Unlike *Baird*, in the present case guar gum is specifically disclosed by Redenbaugh along with many other species (col. 4, lines 66-67). Thus, to arrive at appellant's claimed invention, there is no need to select an undisclosed specie out of a genus encompassing over 100 million species. It is only necessary to select one of many disclosed species. The fact that many species are disclosed would not have made any of them less obvious, particularly where, as here, the material recited in appellant's claim is used for the same purpose taught by the reference, i.e., coating seeds. *See Merck & Co. v. Biocraft Labs.,* 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989).

For the above reasons, we conclude that a gin-run fuzzy cottonseed coated with a guar product such that the dried coated seed is flowable as recited in appellant's claim 1 would have been obvious to one of ordinary skill in the art over Hinkes and Redenbaugh. Accordingly, the rejection of this claim under 35 U.S.C. § 103 is affirmed. Since appellant states that claims 2, 3, 5 and 8 stand or fall with claim 1 (brief, page 5), the rejection of these claims under 35 U.S.C. § 103 also is affirmed. *See* 37 CFR § 1.192(c)(5)(1988).

Regarding claim 4, the examiner argues that the use of whole ground guar would be substantially the same as using guar gum because the properties of the seed coating would be the same (answer, page 9). Appellant does not challenge the examiner's argument but, rather, states that he does not find that the guar gum disclosed by Redenbaugh is properly described as ground guar and does not find it described as the principal ingredient in the coating (brief, page 13). Hinkes' disclosure that the precoating material can be a vegetable gum (col. 3, lines 30-33) indicates that the gum is the principal ingredient of the precoating. Although the references do not disclose use of ground guar, in our view the teaching by Redenbaugh that guar gum is a suitable seed coating material (col. 4, lines 66-67) would have fairly suggested, to one of ordinary skill in the art, that ground guar including the gum also would be an effective coating material.

As for claims 6 and 7, the examiner argues that determining the weight of coating as a percentage of the seed weight would be optimization of a process parameter (answer, page 5). Appellant argues that Hinkes limits the weight to 7% and that Redenbaugh does not indicate the weight (brief, page 14).

The amount of the first coating disclosed by Hinkes is about 0.5 to 5.0 wt% of the coated seed (col. 3, lines 17-19). This

amount is disclosed for use with flame delinted cottonseed (col. 3, lines 14-17). The cottonseed used by Hinkes, however, does not appear to be limited to that which has been flame delinted. Hinkes broadly teaches that "where the seed surface is covered with linters or short fibers, e.g., cotton seed, which alter the surface area of the polymeric-pesticide film, pretreatment is recommended" (col. 1, lines 50-53). Hinkes points out that "[i]t was found that the surface of cotton seed, even after flame delinting, was covered with short fibers" (col. 1, lines 53-55), but then broadly teaches that "[t]hus, the surface of linter covered seed is desirably first precoated with a natural or synthetic substance which will cover the fibers and adhere the fibers to each other as well as to the seed" (col. 1, lines 55-58). In our view, this teaching would have fairly suggested, to one of ordinary skill in the art, that suitable cottonseed includes both that which has and has not been flame delinted, and would have indicated to such a person that the amount of coating needed is that which would cover the fibers and adhere them to the seed. The required amount of coating, whether the amount is within the range disclosed by Hinkes for flame delinted cottonseed or is above this range for cottonseed which has not been flame delinted, would have been determinable by one of

ordinary skill in the art through no more than routine experimentation in view of the Hinkes disclosure. *See In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980); *In re Aller*, 220 F.2d 454, 457, 105 USPQ 233, 236 (CCPA 1955). Thus, cottonseed having a coating of a guar product in an amount recited in appellant's claims 6 and 7 would have been *prima facie* obvious to one of ordinary skill in the art in view of the applied references.

Concerning claim 9[2], appellant argues that neither Hinkes nor Redenbaugh discloses a conditioning binder for reducing dust and toughening and strengthening the coating on the exterior surface thereof (brief, page 14). We are not persuaded by this argument because it appears that the polymeric film (col. 1, lines 35-39) formed on the Hinkes' vegetable gum pretreatment coating would toughen and strengthen the coating and would reduce dust emission from it.

For the above reasons, the rejection of claims 4, 6, 7, and 9 under 35 U.S.C. § 103 over Hinkes and Redenbaugh is affirmed.

Regarding process claim 10, the examiner argues that "wetting the seeds first and then applying a water soluble powder

[2] The amendment to claim 9 submitted in the reply brief filed on April 19, 1994 (Paper No. 15) has not been entered and therefore is not before us.

coat, would be substantially the same as applying the water soluble powder coat to the seed surface in solution" (answer, page 5).

The deficiency in the examiner's argument is that the examiner does not explain where the suggestion to coat seed by wetting the seed and then applying an excess of water-soluble powdered coating material to the seed is found in the prior art. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). *See also Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988).

The examiner also argues that the prior art and appellant's claimed process "would produce the same coated seed" (answer, page 10). As correctly pointed out by appellant (brief, page 20), since claim 10 is directed toward a process, the relevant inquiry under 35 U.S.C. § 103 is not whether the product produced by the process is the same as that of the prior art, but whether appellant's claimed process would have been obvious to one of ordinary skill in the art. Furthermore, the examiner has not

explained why appellant's claimed process and the prior art produce the same coated seed. Appellant's specification (page 17) states that the coating on appellant's seeds, prior to addition of a binder to its surface, has a dusty surface. The examiner has not explained why the prior art process wherein seeds are coated with a solution produces a coating which has a dusty surface or a coating which is the same as one having a binder applied over a dusty surface.

The examiner further argues, in reliance on *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975), that since appellant's recited powder coating method solves no apparent problem and provides no unexpected results, it is a matter of obvious design choice (answer, page 10).

The court in *Kuhle* considered certain aspects of a portable electrical instrument for measuring moisture in soil to be an obvious design choice. The examiner in the present case, however, has not provided a convincing explanation as to why using appellant's powder coating method would have been an obvious design choice. We note that the examiner's statement that appellant's process "solves no apparent problem" is contrary to appellant's specification which indicates that appellant's process solves the problem of poor flowability of fuzzy

cottonseed (specification, page 6, lines 10-14), and we further note that whether appellant's process produces an unexpected result becomes an issue only when the examiner has established a *prima facie* case of obviousness. *See In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 882 (CCPA 1981).

For the above reasons, the examiner has not established a *prima facie* case of obviousness of the invention recited in appellant's claim 10. Accordingly, the rejection under 35 U.S.C. § 103 of this claim and claims 11-20 which depend from it is reversed.

DECISION

The rejections of claims 1-9 under 35 U.S.C. § 101 on the ground that the claimed invention is directed toward non-statutory subject matter, and of claims 10-20 under 35 U.S.C. § 103 as being unpatentable over Hinkes taken with Redenbaugh, are reversed. The rejection of claims 1-9 under 35 U.S.C. § 103 as being unpatentable over Hinkes taken with Redenbaugh is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

EDWARD C. KIMLIN Administrative Patent Judge	)
CHUNG K. PAK Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
TERRY J. OWENS Administrative Patent Judge	)

Appeal No. 95-0678
Application 07/938,960

Wendell Coffee
P. O. Box 3726
Lubbock, TX 79452

TJO/cam